



22506

12223

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Illustrate your answers with neat sketches wherever necessary.
 - (3) Figures to the right indicate full marks.
 - (4) Assume suitable data, if necessary.
 - (5) Use of Non-programmable Electronic Pocket Calculator is permissible.

Marks

1. Attempt any FIVE of the following :

10

- (a) Give the necessity of environmental audit.
- (b) Write any two features of EIA Notification, 2006.
- (c) Write any four non-renewable energy sources.
- (d) Define “Green Building”.
- (e) State the principle of wind energy.
- (f) State any two LEED criteria for certification.
- (g) State the significance of HVAC unit in Green Building.

2. Attempt any THREE of the following :

12

- (a) Describe any four causes of air pollution.
- (b) Suggest the preventive measures to reduce water pollution.
- (c) Write the noise levels for day time and night time for the following :
 - (i) Residential area
 - (ii) Commercial area
 - (iii) Industrial area
 - (iv) Silence zone of city
- (d) Explain client driven type of environmental audit.



- 3. Attempt any THREE of the following :** **12**
- (a) Describe benefits of Environmental Impact Assessment.
 - (b) Write the salient features of green building.
 - (c) Explain the use of bamboo and plastic bricks in the construction of green building.
 - (d) Describe the certification of green building based on Indian Green Building Council.
- 4. Attempt any THREE of the following :** **12**
- (a) Explain LEED certification for building design and construction.
 - (b) Write the points to be considered in Green Rating for Integrated Habitat Assessment.
 - (c) Explain the role of HVAC unit installed in Green Building.
 - (d) Compare GRIHA and IGBC rating system for Green Building.
 - (e) Write the certification criterion of IGBC for a educational buildings.
- 5. Attempt any TWO of the following :** **12**
- (a) Explain the environment audit process for any structure.
 - (b) Describe the specific objective of energy conservation.
 - (c) Explain the functions of government organisation 'National Productivity Council' for energy conservation.
- 6. Attempt any TWO of the following :** **12**
- (a) Differentiate between renewable and non-renewable energy sources (min. six points).
 - (b) Explain the concept of Environmental Design as applied to Green Building.
 - (c) Explain the application of Non-toxic paint, Green roofing materials and insulated concrete forms in a Green Building.

